

How large should the bevel be on a 185 cable tray



Overview

Cable Tray Design: Sizing, Fill, and Support Spacing Larger cable/tray combinations use a formula based on the sum of the cross-sectional areas of the cable.

Key Takeaways

For a 185 mm cable tray, the bevel or edge chamfer is typically sized to allow smooth cable entry and maintain the minimum bending radius, usually around 10-15 mm depending on cable type.

General Guidelines

The bevel on a cable tray is intended to prevent cable damage when cables are pulled into the tray and to maintain the minimum bending radius recommended by the cable manufacturer. For a 185 mm wide tray, which is considered a medium-duty tray, the bevel should be sized to accommodate the largest cable diameter in the tray without violating bending radius requirements. Typical recommendations include:

- Bevel width: 10-15 mm on each side of the tray edge for smooth cable entry.
- Edge radius: Rounded or chamfered edges reduce abrasion and stress on insulation. A radius of 5-10 mm is common for medium-duty trays.

- **Material thickness:** Ensure the bevel does not compromise structural integrity; standard tray thicknesses for 185 mm trays are usually 1.2–2 mm steel or aluminum .
Additional Considerations
 - **Cable bending radius:** Always follow the cable manufacturer's minimum bending radius. For power cables, this is often 6–12 times the cable diameter. The bevel should allow this radius without sharp edges .
 - **Tray type:** Ladder trays may require larger bevels at the side rails if cables exit the bottom or sides. Solid-bottom trays may need additional chamfering to prevent insulation damage during installation .
 - **Compliance:** Ensure the beveling method does not violate NEC Article 392 or IEC 61537 requirements for cable support and protection .
- Practical Tip

Before installation, test a sample cable in the tray with the proposed bevel to ensure smooth pulling and no insulation damage. Adjust the bevel width or radius if necessary, especially for mixed cable diameters or sensitive instrumentation cables. This approach ensures both safety and compliance while maintaining long-term reliability.

Article Content

B-Line series Cable Tray Design Considerations

If these cables above would completely fill a 30-inch wide cable tray, selecting a 36-inch wide tray in your design would make space

Cable Tray Design and Sizing Guide

The document discusses key factors to consider when designing a cable tray system, including: 1) Determining the appropriate width

Cable Tray Sizing & Fill Ratio Guide — NEC 392

This guide covers how to calculate cable tray fill ratio and minimum width per NEC 392, with cross-references to NEMA VE 1 and

Cable Tray Design and Standards Guide

The document outlines codes and standards that must be followed for design and construction of cable trays and their components.

Cable tray manual

Instead of large conduits, cable channel may be used very effectively to support cable drops from the cable tray run to the equipment

Cable Tray Technical Guide A practical guide to product selection

A practical guide to product selection and installation This guide for engineers and installers has been developed by ABB as a

B-Line series Cable Tray Design Considerations

As an industry leader in cable tray, Eaton offers one of the widest ranges of cable management solutions available in the market

NEMA Standards Publication VE 2-2006

Foreword For Cable Tray Installers—This publication is intended as a practical guide for the proper installation of cable tray systems.

Cable Tray Technical Guide A practical guide to product selection

SOLID-BOTTOM CABLE TRAY Providing additional cable protection, solid-bottom cable tray is sometimes preferred to support and

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A channel cable tray can be added to an existing cable tray system using the method illustrated in Figure 3-89 to add approved

Cable tray

In the electrical wiring of buildings, a cable tray system is used to support insulated electrical cables used for power distribution,

Installation Of Cable In Cable Trays: NEC, Safety

The use of ladder-type trays as raceways for insulated cables is becoming more prevalent. These raceways are being more heavily

Best Practice Guide to Cable Ladder and Cable Tray Systems

This guide covers cable ladder systems, cable tray systems, channel support systems and associated supports intended for the

Cable Tray SHIB NAL

Because cable trays offer flexibility for expansion and changes, engineers and designers should design and size cable tray systems

Cable Trays Selection Guide: Types, Features, Applications

Cable trays are components of support systems for power and communications cables and wires. A cable tray system supports and

Best Practices for Cable Tray Design

Conclusion Following best practices in cable tray design is essential to ensuring the efficiency, safety, and durability of

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